

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of the Claims:

1. (Currently amended) A package for a high frequency electrical circuit comprising a cavity formed within a material for containment of the electrical circuit, wherein the package additionally includes a material extending into the cavity the material extending into the cavity having a conductive region, the conductivity thereof being adapted to provide a resistance arranged to substantially match the wave impedance of an electromagnetic field that would be otherwise expected to exist in the package if the conductive material were not present—be at least partially absorbent to electromagnetic radiation.
2. (Previously presented) A package as claimed in claim 1 wherein the material extending into the cavity comprises a layered structure with a first layer comprising a substrate and a second layer comprising a conductive material.
3. (Original) A package as claimed in claim 2 wherein the substrate comprises a material chosen from alumina, quartz, plastic, glass and cardboard.
4. (Previously presented) A package as claimed in claim 2 wherein the substrate comprises a dielectric occupying a substantial region of the cavity.
5. (Previously presented) A package as claimed in claim 1 wherein the material having the at least one conductive region takes the form of a vane.
6. (Previously presented) A package as claimed in claim 1 wherein at least one region of the conductive material is arranged to have a specific resistance substantially similar to the impedance of a predicted electromagnetic field that will be present when the cavity is in use.

7. (Previously presented) A package as claimed in claim 1 wherein the conductive material has conductivity properties different to that of other parts of the cavity.

8. (Previously presented) A package as claimed in claim 1 wherein the package is designed to house circuitry operative in at least one of the millimetre wave and sub-millimetre wave region.

9. (Previously presented) Currently amended) A package as claimed in claim 1 wherein the material extending into the cavity is mounted on a removable portion of the package.

10. (Previously presented) A package as claimed in claim 1 wherein the material extending into the cavity is mounted such that it is substantially normal to the surface on which it is mounted.

11. (Previously presented) A package as claimed in claim 1 wherein the at least one conductive region is mounted in a substantially symmetric fashion within the cavity in relation to a pair of opposing walls of the package.

12. (Previously presented) A package as claimed in claim 1 wherein the material extending into the cavity is substantially planar.

13. (Previously presented) A package as claimed in claim 1 wherein the conductive material comprises nichrome.

14. (Previously presented) A package as claimed in claim 1 wherein the conductive material comprises carbon.

15. (Currently amended) A vane for suppressing cavity mode radiation and suitable for mounting within a package for a high frequency electrical circuit, the vane comprising at least in part a layer of conductive material, the conductivity thereof being adapted to provide a resistance arranged to substantially match the wave impedance of an electromagnetic field that would be

~~otherwise expected to exist in the package if the conductive material were not present—be at least partially absorbent to electromagnetic radiation.~~

16. (Previously presented) A vane as claimed in claim 15 wherein the vane comprises a substrate upon which is arranged the conductive material layer.

17. (Previously presented) A vane as claimed in claim 15 wherein the vane is mounted to an inner surface of the package by being affixed substantially along an edge of the vane.

18. (Currently amended) A high frequency electrical circuit mounted within a cavity in a package, wherein the cavity has an inner surface on which is positioned a material having a conductive surface extending into the cavity, the conductivity thereof being adapted to provide resistance arranged to substantially match the wave impedance of an electromagnetic field that would be otherwise expected to exist in the package if the conductive material were not present ~~be at least partially absorbent to electromagnetic radiation.~~

19. (Currently amended) A method of manufacturing a package for a high frequency electrical circuit, comprising positioning a material having a conductive region on an inner surface of the package, the said material having the conductive region extending into the package, and the conductivity thereof being adapted to provide resistance arranged to substantially match the wave impedance of an electromagnetic field that would be otherwise expected to exist in the package if the conductive material were not present ~~be at least partially absorbent to electromagnetic radiation.~~

20. (Previously presented) A method as claimed in claim 19 wherein the conductivity of the conductive region is chosen by one of: simulation of expected electrical properties of circuitry within the package, and a trial and error approach.

21. (Previously presented) A package as claimed in claim 1 wherein at least one conductive region is substantially cylindrical.

22. (Previously presented) A vane as claimed in claim 15 wherein the vane is mounted to an inner surface of the package by being affixed within a slot in the inner surface.

23. (Previously presented) A package as claimed in claim 1 wherein the region having thereupon the conductive material resides in a slot located in a dielectric material in the cavity.

24. (Previously presented) A package as claimed in claim 1 wherein the conductive material resides in a hole located in a dielectric material cavity.

25. (Previously presented) A package as claimed in claim 24 wherein the hole has a cylindrical form.

26. (Previously presented) A package as claimed in claim 1 wherein the conductive material takes the form of an ink.

27. (Previously presented) A package as claimed in claim 4 wherein the substrate is perpendicular to at least one wall of the package, the substrate having thereupon the conductive material.

28. (Currently amended) A package for a high frequency electrical circuit comprising a cavity formed within a material for containment of the electrical circuit, wherein the package additionally includes a material extending into the cavity, the material extending into the cavity having at least one conductive region, the conductivity thereof being adapted to provide resistance arranged to substantially match the wave impedance of an electromagnetic field that would be otherwise expected to exist in the package if the conductive material were not present ~~be at least partially absorbent to electromagnetic radiation~~, with the conductive region having a resistivity of between $10\Omega/\text{square}$ and $1\text{k}\Omega/\text{square}$.

29. (Previously presented) A package as claimed in claim 28 wherein the material extending into the cavity comprises a layered structure with a first layer comprising a substrate and a second layer comprising a conductive material.

30. (Previously presented) A package as claimed in claim 29 wherein the substrate comprises a dielectric occupying a substantial region of the cavity.

31. (Previously presented) A package as claimed in claim 28 wherein the material having the at least one conductive region takes the form of a vane.

32. (Previously presented) A package as claimed in claim 28 wherein the region having thereupon the conductive material resides in a slot located in a dielectric material in the cavity.

33. (Previously presented) A package as claimed in claim 28 wherein the conductive material resides in a hole located in a dielectric material in the cavity.

34. (Currently amended) A package for a high frequency electrical circuit comprising a cavity formed within a material for containment of the electrical circuit, wherein the package additionally comprises a dielectric material extending into the cavity and occupying a substantial region thereof, the dielectric material extending into the cavity incorporating a resistive material on a surface thereof, the resistivity of the resistive material being adapted to provide resistance arranged to substantially match the wave impedance of an electromagnetic field that would be otherwise expected to exist in the package if the conductive material were not present~~be at least partially absorbent to electromagnetic radiation.~~